

## **REMARKS**

The above Amendments and these Remarks are in reply to the Office Action mailed December 8, 2004. Claims 1-51 are pending in the application. Claims 1-7, 10, 12-14, 17, 22, 23-24, 28-33, 34, 41, 42, 46, 47, and 49 have been amended. Claims 9, 21, 27, 40, 45, and 50 have been cancelled. Claims 52-57 have been added. Applicant respectfully requests reconsideration of claims 1-8, 10-20, 22-26, 28-39, 41-44, 46-49, and 51 and consideration of newly added claims 52-57.

### **I. Rejection of Claims 1-51 under 35 U.S.C. § 101**

#### **Claims 1-11 and 45-47**

Independent claim 1 was rejected as being inoperative and therefore lacking utility for reciting modeling a memory read operation and a write operation using a lookup table before the lookup table has been inserted into an electronic circuit design. Claim 1 has been amended to recite “replacing a portion of the description of the electronic circuit design with a lookup table” and then “simulating the electronic circuit design,” where the simulating includes, “modeling a memory write operation,” and “modeling a memory read operation.” It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 1 has utility as defined in 35 U.S.C. § 101. Claims 2-8, 10-11, and 46-47 each ultimately depend from claim 1 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

#### **Claims 12-13 and 48**

Independent claim 12 was rejected for the same reasons as claim 1. Claim 12 has been similarly amended to recite “replacing a portion of the description of the electronic circuit design with the lookup table” and then “simulating the electronic circuit design,” using the lookup table. It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 12 has utility as defined in 35 U.S.C. § 101. Claims 13 and 48 each ultimately depend from claim 12 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

#### **Claims 14-22 and 49**

Independent claim 14 was rejected for the same reasons as claim 1. Claim 14 has been similarly amended to recite “replacing a portion of the description of the electronic circuit design with a memory model” and then “simulating the electronic circuit design,” using the memory model. It is

respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 14 has utility as defined in 35 U.S.C. § 101. Claims 15-20, 22 and 49 each ultimately depend from claim 14 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

#### Claims 29-33 and 51

Independent claim 29 was rejected for the same reasons as claim 1. Claim 29 has been similarly amended to recite “replacing a portion of the description of the electronic circuit design with a lookup table” and then “simulating the electronic circuit design,” using the lookup table. It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 29 has utility as defined in 35 U.S.C. § 101. Claims 30-33 and 51 each ultimately depend from claim 29 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

#### Claims 34-41

Independent claim 34 was rejected for the same reasons as claim 1. Claim 34 has been similarly amended to recite “replacing a portion of the description of the electronic circuit design with the memory model” and then “simulating the electronic circuit design,” using the memory model. It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 34 has utility as defined in 35 U.S.C. § 101. Claims 35-39 and 41 each ultimately depend from claim 34 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

#### Claims 42-44

Independent claim 42 was rejected for the same reasons as claim 1. Claim 42 has been similarly amended to recite “replacing a portion of the description of the electronic circuit design with the lookup table” and then “simulating the electronic circuit design,” using the lookup table. It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 42 has utility as defined in 35 U.S.C. § 101. Claims 43-44 each ultimately depend from claim 42 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

### Claims 23-28 and 50

Independent claim 23 was rejected as being inoperative and therefore lacking utility for reciting “creating the lookup table” prior to “creating a hardware description language of the lookup table.” Claim 23 has been amended to recite “creating a hardware description language of a plurality of components of the electronic circuit design including the physical memory,” “synthesizing a gate level description of the plurality of components of the electronic circuit design including the physical memory,” and then, “replacing a portion of the gate level description relating to the physical memory with the lookup table.” It is respectfully submitted that the amendments rectify the inoperability and utility issue raised by the Examiner, and accordingly, that claim 23 has utility as defined in 35 U.S.C. § 101. Claims 24-26 and 28 each ultimately depend from claim 23 and should be patentable under 35 U.S.C. § 101 for at least the same reasons.

## **II. Rejection of Claims 1-51 under 35 U.S.C. § 112, second paragraph**

### Claims 1-11, 45-47

Independent claim 1 was rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential elements. Claim 1 has been amended to include the additional step of “accessing a description of the electronic circuit design.” It is respectfully submitted that the additional step rectifies the omission identified by the Examiner. Applicant further submits that the recitation of “creating a description” is not necessary to establish a functional claim having all essential steps. All that is necessary and essential for the claim is that the description be available to the method, apparatus, or storage medium performing the recited steps. For example, the description may be created by a separate method, apparatus, or storage medium. A method, apparatus, or storage medium performing the steps of claim 1 can access and modify the preexisting description rather than create it itself. This is in no way non-functional or lacking an essential element as all steps necessary for “modeling” as recited in the preamble are recited. Accordingly, it is respectfully submitted that claim 1 is patentable under 35 U.S.C. § 112, second paragraph. Claims 2-8, 10-11, and 46-47 each ultimately depend from claim 1 and should be patentable under 35 U.S.C. § 112, second paragraph, for at least the same reasons.

### Claims 12-22, 29-44, and 48-49, and 51

Independent claims 12, 14, 29, 34, and 42 were rejected for the same reasons as claim 1. Claims 12, 14, 29, 34, and 42 have been similarly amended to recite “accessing a description of the

electronic circuit design.” It is respectfully submitted that claims 12, 14, 29, 34, and 42 are patentable under 35 U.S.C. § 112, second paragraph, for at least the same reasons as claim 1. Claims 13-20, 22, 33, 35-39, 41, 43-44, 48-49, and 51 each ultimately depend from one of claims 12, 14, 29, 34, and 42, and therefore, should be patentable for at least the same reasons.

#### Claims 23-28 and 50

Independent claim 23 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The offending language, “upper limit,” has been removed from claim 23. Accordingly, it is respectfully submitted that claim 23 is patentable under 35 U.S.C. § 112, second paragraph. Claims 24-26 and 28 each ultimately depend from claim 23 and should be patentable under 35 U.S.C. § 112, second paragraph, for at least the same reasons.

### **III. Rejection of Claims 1-8, 11-20, 23-26, 29-39, and 42-51 under 35 U.S.C. § 103(a)**

Claims 1-8, 11-20, 23-26, 29-39, and 42-51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Weems*, in view of *Glossary*, and further in view of *Wohl*.

Claims 9-10, 21-22, 27-28, and 40-41 were not rejected under 35 U.S.C. § 103(a). The Examiner noted that the prior art fails to disclose each limitation of these claims and that he would favorably consider these claims if they were amended to incorporate the limitations of their parent claims.

Independent claim 1 has been amended to include the limitations of non-rejected claim 9, modified for stylistic purposes for better insertion with the claim language of claim 1. Accordingly, it is respectfully submitted that claim 1 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 2-8, 11, and 46-47 each ultimately depend from claim 1 and should be patentable for at least the same reasons.

Independent claim 12 has been amended to include similar limitations to those of non-rejected claim 9, modified for stylistic purposes for better insertion with the claim language of claim 12. The portions of claim 9 incorporated into claim 12 have also been modified to reflect the uninterpreted combinational block that is modeled therein as opposed to the physical memory recited in claim 9. Accordingly, it is respectfully submitted that claim 12 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 13 and 48 each ultimately depend from claim 11 and should be patentable for at least the same reasons.

Independent claim 14 has been amended to include the limitations of non-rejected claim 21, modified for stylistic purposes for better insertion with the claim language of claim 14. Accordingly, it is respectfully submitted that claim 14 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 15-20 and 49 each ultimately depend from claim 14 and should be patentable for at least the same reasons.

Independent claim 23 has been amended to include the limitations of non-rejected claim 27, modified for stylistic purposes for better insertion with the claim language of claim 23. Accordingly, it is respectfully submitted that claim 23 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 24-26 each ultimately depend from claim 23 and should be patentable for at least the same reasons.

Independent claim 29 has been amended to include the limitations of non-rejected claim 9, modified for stylistic purposes for better insertion with the claim language of claim 29. Accordingly, it is respectfully submitted that claim 29 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 30-33 and 51 each ultimately depend from claim 29 and should be patentable for at least the same reasons.

Independent claim 34 has been amended to include the limitations of non-rejected claim 40, modified for stylistic purposes for better insertion with the claim language of claim 34. Accordingly, it is respectfully submitted that claim 34 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 35-39 each ultimately depend from claim 34 and should be patentable for at least the same reasons.

Independent claim 42 has been amended to include similar limitations to those of non-rejected claim 9, modified for stylistic purposes for better insertion with the claim language of claim 42. The portions of claim 9 incorporated into claim 42 have also been modified to reflect the uninterpreted combinational block that is modeled therein as opposed to the physical memory recited in claim 9. Accordingly, it is respectfully submitted that claim 42 is patentable over the cited art under 35 U.S.C. § 103(a). Claims 43-44 each ultimately depend from claim 42 and should be patentable for at least the same reasons.

#### **IV. Added Claims**

Claims 52-57 have been added. Each of these claims depends from one of claims 1, 12, 14, 29, 34, and 42. Claims 52-57 are submitted to be patentable for at least the same reasons as the claims from which they depend.

V. Conclusion

Based on the above amendments and these remarks, reconsideration and allowance of claims 1-8, 10-20, 22-26, 28-39, 41-44, 46-49, and 51 is respectfully requested. Consideration of newly added claims 52-57 is also requested.

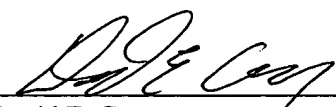
The Examiner's prompt attention to this matter is greatly appreciated. Should further questions remain, the Examiner is invited to contact the undersigned attorney by telephone.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond up to and including today, March 17, 2005

No fee is believed due with this communication. However, the Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 501826 for any matter in connection with this document, including any fee for extension of time, which may be required.

Respectfully submitted,

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